

Claims

Claimed is:

1. A carpet prepared by the process of:
forming a thread comprising at least one low melt fiber and at least one higher melting point fiber constituent;
heating said thread above a temperature sufficient to melt said low melt fiber;
tufting said thread in a carpet backing to form a tufted carpet; and
printing an image on said tufted carpet.
2. The carpet of claim 1 wherein said low melt fiber is incorporated in said thread during blending.
3. The carpet of claim 1 wherein said low melt fiber is incorporated in said thread during doubling.
4. The carpet of claim 1 wherein said low melt fiber is incorporated in said thread during twisting.
5. The carpet of claim 1 wherein said low melt fiber is incorporated in said thread during spinning.
6. The carpet of claim 1 wherein said thread is heated to a temperature of about 60°C to about 160°C.
7. The carpet of claim 6 wherein said temperature is no more than about 120°C.
8. The carpet of claim 1 wherein said low melt fiber comprises polyamide.
9. The carpet of claim 8 wherein said polyamide is selected from a group consisting of nylon 6,6 and nylon 6.

10. The carpet of claim 1 wherein said higher melting point fiber constituent is selected from the group consisting of nylon, wool, polyester, polypropylene, and blends thereof.
11. The carpet of claim 1 wherein said printing is carried out by a jet dye machine in a pixelate fashion.
12. The carpet of claim 1 wherein said higher melting point fiber constituent at least one of nylon and wool.
13. The carpet of claim 1 wherein said higher melting point fiber constituent is a nylon wool blend.
14. The carpet of claim 1 wherein said thread has a yarn count of about 1.0 to about 5.0.
15. The carpet of claim 1 wherein said thread has a yarn count of about 2.
16. The carpet of claim 12 comprising about 8 to about 28 denier per filament for nylon.
17. The carpet of claim 12 wherein said wool is about 25 to about 40 microns.
18. The carpet of claim 12 wherein said wool is about 38 microns.
19. The carpet of claim 1 wherein said thread has a yarn count of about 0.5 to about 8.0.
20. The carpet of claim 19 wherein said yarn count is about 3.
21. The carpet of claim 1 wherein said thread has about 1 to about 10 twist per inch.
22. The carpet of claim 21 wherein said thread has about 5 twist per inch.
23. The carpet of claim 22 wherein said thread is a 1 to 4 ply.
24. The carpet of claim 21 wherein said thread is plied nylon with about 4.5 twist per

inch.

25. The carpet of claim 1 wherein said thread has about 6-25 denier per filament.
26. The carpet of claim 25 wherein said thread has about 19 denier per filament.
27. The carpet of claim 25 wherein said thread has 1 to 4 ply not including said low melt.
28. The carpet of claim 27 wherein said thread is 2 ply.
29. A process for forming printed carpet comprising the steps of:
forming a thread comprising low melt fiber and a higher melting point fiber constituent;
heating said thread above a temperature sufficient to melt said low melt fiber;
tufting said thread in a carpet backing to form a tufted carpet; and
printing an image on said tufted carpet after heating.
30. A carpet prepared by the process of:
forming a blended fiber comprising a low melt fiber and a higher melting point fiber constituent;
forming a thread of said blended fiber;
heating said thread above a temperature sufficient to melt said low melt fiber;
tufting said thread in a carpet backing to form a tufted carpet; and
printing an image on said tufted carpet after heating.
31. A carpet prepared by the process of:
forming a thread from a first fiber constituent;
passing said thread through a doubling or winding process wherein a lower melting point fiber or thread is added;

spinning to form a combined thread;
heating said combined thread above a temperature sufficient to melt said lower melting point fiber or thread;
after heating tufting said combined thread in a carpet backing to form a tufted carpet; and
printing an image on said tufted carpet.

32. A carpet prepared by the process of:

forming a fiber blend;
passing said fiber blend through a ring spinning process wherein a lower melting point fiber is added to said fiber blend to form a combined thread;
heating said combined thread above a temperature sufficient to melt said lower melting point fiber;
tufting said combined thread in a carpet backing to form a tufted carpet; and
printing an image on said tufted carpet.

33. A process for forming jet dyed patterned carpet comprising the steps of:

forming a blended fiber comprising a low melt fiber and a high melt fiber;
forming a thread of said blended fiber;
heating said thread above a temperature sufficient to melt said low melt fiber;
tufting said thread in a carpet backing to form a tufted carpet; and
printing an image on said tufted carpet using a jet dye machine.

34. In a patterned carpet, the improvement comprising:

a carpet yarn having a first fiber constituent and at least a second fiber constituent having a melting point less than the first fiber constituent, the carpet yarn having

been heated sufficiently to melt at least a portion of the second fiber constituent prior to patterning.